

REMARKS

Claims 1-11 are pending. Claims 2-4 are under examination, with claims 1 and 5-11 standing withdrawn from further consideration, based on an earlier restriction requirement of the Examiner.

Claim 2 was previously dependent on withdrawn claim 1. Claim 2 has now been rewritten as an independent claim to facilitate prosecution. All amendments made herein to claim 2 are supported by claim 1. The scope of claim 2 has not been changed.

Claim 4 has been amended to be solely dependent on claims 2-3, which are also being considered at present.

Claims 5-8 have also been amended to be solely dependent from claims 2-3 are thus submitted to be proper for rejoinder at present

Election/Restriction

The record speaks for itself, so that no response is required to paragraph 1 on page 2 of the last office action, except to note that rejoining of claims 5-8 appears to be appropriate at present.

Claim Rejections - 35 USC § 103

The rejection in paragraphs 2-5 of the last office action of claims 2-4 as obvious under 35 USC 103 in view of US patent 5,854,201 (Behler) is traversed. The rejection in paragraph 6 of the last office action of claims 2-4 as obvious under 35 USC 103 over Behler '201 in view of US patent 5,296,622 (Uphues) is traversed.

The Present Invention and Its Advantages

The present invention as recited in independent claim 2 is directed to a softener composition, which comprises quaternary ammonium salts. The Salts are composed of salt (I), (II) and (III), they are represented by the formulae in Claim 2.

Salt (I) has only one alkyl, alkenyl or hydroxy alkyl group which has 1 to 6 carbon atoms (i.e., R^4 is short chain) and three long chain alkyl or alkenyl groups which have 8 to 40 carbon atoms (i.e., $R^1 - R^3$ are long chains). Accordingly, Salt (I) has 1 short chain and 3 long chains, Salt (II) has 2 short chains (R^4) and 2 long chains (R^1 and R^2), and Salt (III) has 3 short chains (R^4) and 1 long chain (R^1).

Claim 2, also recites that the amount of Salt (I) to be more than 50% of total of the Salt (I), (II) and (III), and recites that

the ratio of Salt (III) to the sum total of (I), (II) and (III) to not more than 10%.

The inventive softener compositions exhibit excellent softening properties and biodegradability.

Distinctions Over the Cited Art

Behler '201

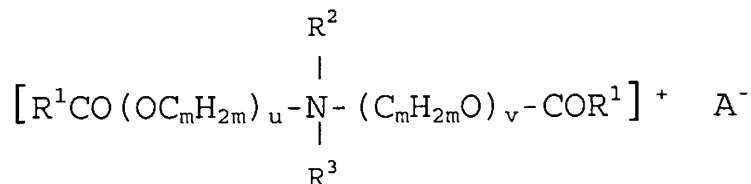
Behler '201 discloses and shows softeners. At column 3, line 50 and there after, there is a description of:

"Quaternized fatty acid alkanolamine esters corresponding to general formula (II), in which R^1CO is an acyl group derived from pure fatty acids or technical mixtures of fatty acids, such as lauric, myristic, palmitic, stearic, oleic, elaidic, petroselic, linoleic, linolenic, arachic, behenic and/or erucic acid, are preferred for the purposes of the invention. In a particularly preferred embodiment, R^1Co in formula (II) is a saturated acyl group containing 16 and/or 18 carbon atoms, R^3 is a methyl group, m is the number 2, u , v and w are each the number 1 and A is a halide, methosulfate or methophosphate." (emphasis added)

However, it is submitted that no description is contained in the Behler '201 reference that directly indicates or teaches a Salt (I) of the present invention. Instead, at a minimum one would have to combine the following description of the formula (II) at column 8, lines 21-37 with those noted above at column 3 to reach

the Inventors Salt (I), without any expressed teachings therein to do so.

"biii) quaternized fatty acid alkanolamine esters corresponding to formula (II):



in which R^1CO is a saturated or unsaturated acyl group containing 12 to 22 carbon atoms, R^2 is a group $\text{R}^1\text{CO}(\text{OC}_m\text{H}_{2m})_w$, an alkyl group containing 1 to 4 carbon atoms or a hydroxyalkyl group containing 2 to 4 carbon atoms and R^3 is an alkyl group containing 1 to 4 carbon atoms or a hydroxyalkyl group containing 2 to 4 carbon atoms, m is the number 2 or 3, u , v and w are each a number of 1 to 4 and A^- is an anion...."

Further, it is submitted that there is no teaching in the cited art that would motivate one of ordinary skill in the art to use a combination of the Inventors salts (I), (II) and (III) in the amounts recited in claim 2, wherein:

"...the ratio of the quaternary ammonium salts represented by the formula (I) to the total amount of the quaternary ammonium salts represented by the formulae (I), (II) and (III) exceeds 50 weight % and the ratio of (III) to the sum total of (I), (II) and (III) is not more than 10 %...."

In support of Applicants contention that the cited Behler '201 reference provides no description of an amount of formula (I), one need only look to Example A2 of Behler '201, which actually teaches away from the instant invention by utilizing one of its Salt (II) therein in an amount of not more than 50%.

In Example A2 of Behler '201 (see column 6, lines 50-57), the percentage amounts of the salts in the Example "A2" of reference are as follows (*as calculated by the Present Inventors*):

Chemical (I)- tri-long-chain alkyl quaternary ammonium salt, is 39.8 wt%,

Chemical (II)- di-long-chain alkyl quaternary ammonium salt, is 45.0 wt%, and

Chemical (III)- mono-long-chain alkyl quaternary ammonium salt, is 15.2 wt%.

In contrast to the teachings of Behler '201 and its Example A2, instant claim 2 requires that the amount of Salt (I) to be more than 50% of total of the Salt (I), (II) and (III).

Thus, it is clear that '201 does not suggest Salt (I) should be present in an amount of more than 50%, and therefore completely fails to teach a required aspect of the instant invention.

Accordingly, it is submitted that there are no teachings in the Behler '201 reference that would allow one of ordinary skill in the art to arrive at the instant invention as claimed. This conclusion is based on the fact that (i) there is no direct citation of the Inventors Salt (I) in the prior art of Behler '201, and (ii) that there is no teaching or description of the requirement that the amount of Salt (I) be more than 50% of total of the Salt (I), (II) and (III), and that the ratio of Salt (III) to the sum total of (I), (II) and (III) to not more than 10%.

Uphues '622

The rejection in paragraph 6 of the last office action of claims 2-4 as obvious under 35 USC 103 over Behler '201 in view of US patent 5,296,622 (Uphues) is traversed.

The deficiencies of Behler are not cured by the disclosure of Uphues '662. Accordingly, even upon combining the disclosures of Uphues '662 and Behler '201 one of ordinary skill in the art would not be motivated to arrive at the instant invention as claimed. Absent such teachings and motivation in the cited art, the outstanding rejections cannot be sustained.

Art Cited But Not Applied

As the Examiner has correctly recognized the prior art cited but not applied neither discloses nor suggests the claimed invention.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 

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